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'TIL DEATH DO I WAIT:  
EXPERIENCES OF FOOD INSECURITY AMONG ELDERS  
ON THE MEALS ON WHEELS WAITLING LIST

by

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B.A. University of Central Florida, 2012

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Arts  
in the Department of Sociology  
in the College of Sciences  
at the University of Central Florida  
Orlando, Florida

Spring Term  
2014

Major Professor: Amy M. Donley

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## **ABSTRACT**

Food insecurity is not a new phenomenon experienced by elderly persons living in the United States. In a recent report by Feeding America, approximately 4.8 million Americans over the age of 60 are food insecure, which has doubled since 2001, and is 50% higher than in 2007. Due to lack of funding to the program, Meals on Wheels by Seniors First is unable to give meals to seniors in the Central Florida area who are food insecure. Through structured face-to-face interviews, this study examines elders on the program's waiting list and explores how this population obtains food if they are not being served through the program. Findings suggest that seniors on the waiting list are in need of the resource for survival, not convenience. This study has strong implications in which additional funding is needed as the Baby Boomer population ages and the need for food programs increases.

I dedicate this thesis to my family, friends, and all to all of those who have supported me along the way. I would not be where I am today without you all. I also dedicate this to my Chair, Dr. Amy M. Donley. Thank you for always being there for me, and thank you for being a friend. After all of this work, a thesis finally came to fruition. I would like to also thank and dedicate this thesis to my committee members, Dr. David A. Gay and Dr. James D. Wright. My success is only measured by the hard work that you have put in being terrific committee members and professors in my academic career.

## **ACKNOWLEDGMENTS**

I would like to thank Seniors First, Inc. for allowing me to interview seniors on their waiting list. Their efforts to secure participants for me and putting together the tote bags for the participants were above and beyond. I could not have conducted my research without all of their assistance.

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## **INTRODUCTION**

According to the United States Department of Agriculture (USDA) food insecurity is defined as “the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (United States Department of Agriculture 2012). While many people across different demographic groups face food insecurity, this paper focuses specifically on food insecurity among the elderly in Central Florida. Food insecurity is not a new phenomenon experienced by elderly persons living in the United States. In a recent report by Feeding America, approximately 4.8 million Americans over the age of 60 are food insecure. This number has doubled since 2001, and is 50% higher than in 2007 (Ziliak & Gundersen 2013). The number is expected to continue to rise as the youngest persons of the Baby Boom Generation age into their retirement years.

Although this is a growing problem in our society, the issue of elderly persons’ inability to obtain food is not widely discussed despite projections that the problem is worsening. In previous research, food insecurity is usually discussed in terms of geographical location, either rural or urban, and demographic analyses of people facing hunger are often absent, perhaps because we as a society believe that the elderly population is taken care of, either by social security benefits, the assistance of families, or through extant social welfare programs.

Meals on Wheels is an example of one of the programs for seniors needing assistance with food security. Meals on Wheels programs are found pretty much everywhere; here I focus on the Meals on Wheels program by Seniors First in Orange County, Florida. Due to lack of funding, this program is unable to give meals to all seniors in the Central Florida area who are food insecure and program-eligible; thus, there is a waiting list for this service. And in this, the

Orange County program is by no means alone; similar waiting lists are common in these programs elsewhere. The question I wish to address in this thesis, therefore, is how do elderly people on the Meals on Wheels waiting list feed themselves while they are waiting to receive Meals on Wheels services.

By conducting in-depth, face-to-face interviews with elders on the program's waiting list, this study explored how this population obtains food while they are not being served through the program. It is expected that some seniors may rely on support from family members. However, not all seniors are fortunate enough to be supported by family and may be skipping meals throughout the day or week to make ends meet. They also may have been reducing portion sizes to make their food go farther. Additionally, seniors addressed barriers that they face in obtaining food, such as physical mobility or lack of transportation. The ultimate importance of this study is that, according to a long line of research, health issues among seniors are exacerbated if they do not have nutritionally adequate diets.

## **LITERATURE REVIEW**

Currently, food insecurity is associated mainly with income. The prices of food had been relatively stable throughout the mid-1980s to the early 2000s, but in 2006 the market saw a rapid increase in the costs for food, and the prices continue to rise (Wenzlau 2013). With the great recession occurring in the United States in 2007, the prices for food still increased while people were being laid off from their jobs or having their salaries and benefits cut. Additionally, the recession caused cost of living raises to be frozen for elderly programs, such as Social Security from years 2009-2011 (Sedensky 2010). Social Security is important to many seniors; without it, the number of seniors living in poverty would quintuple (DeNavas-Walt et al. 2012). Due to the freeze of social security payments, seniors had to adjust to having their monthly income being stagnant while expenditures such as food, rent, taxes, prescribed medications, and medical expenses had risen.

Financial resources are not the only variable related to food insecurity among elderly persons. Other factors associated with food insecurity for elderly persons are “functional impairments, health problems, and lack of social support” (Lee & Frongillo Jr 2001). In their study of elderly persons aged 60-96 years old, Lee & Frongillo Jr (2001) examined two different data sets—the 1988- 1994 National Health and Nutrition Examination Survey (NHANES III) and the 1994 NSENY, which was provided by the Elderly Nutrition Program in New York. The NHANES III (N=6558) asked questions related to food insecurity, health issues, physical functioning, sociodemographic information, and economic factors. The NSENY (N= 406) had information relating to food insecurity, nutritional risk, and eligibility for a home-delivered meal program of the elderly population in New York (Lee & Frongillo Jr 2001). Findings suggest that in addition to functional impairments, elders living in poverty, of minority status, with less

education, and who were socially isolated were associated most with food insecurity (Lee & Frongillo Jr 2001).

### Demographics

National research has examined the demographics of elders who experience food insecurity. As noted in a recent report by Feeding America and The National Foundation to End Senior Hunger (2013), demographics are important because service providers need to take into account who is experiencing food insecurity and make their programs accessible to these individuals. However, while demographic information is accessible through national data, there has been little research conducted on other aspects related to seniors facing food insecurity or why those of specific demographics, such as older females, face food insecurity. Also, the demographics are not analyzed on a multivariate level, meaning that we are able to see that older females face food insecurity more than their male counterparts, but we do not know the race of these females or if they are caring for a grandchild. Moreover, the topic of food insecurity among the elderly population is researched more from a health and medical perspective than as a social issue. Therefore, we as a society are left hypothesizing on why specific populations of elders face food insecurity while other elements of the elderly population do not.

Seniors are more likely to experience food insecurity if they have a physical disability (Ziliak & Gundersen 2013). Other researchers have also seen a connection between physical and mental disabilities and food insecurity (Wallace et al. 2007; Auslander & White 2009; Brewer et al. 2010). According to Wallace et al. (2007), California seniors (65 and older; N=8,600) with physical disabilities have reported higher rates of food insecurity in comparison to California seniors who do not have a physical disability. As mentioned in the research brief, it is harder for

older individuals with a disability to obtain food or to cook meals because their mobility is limited. However, if seniors find themselves to be food insecure, it places them at higher risks for illness, disease, and physical disability. Moreover, being food insecure for seniors impacts their ability to take their medication for their illnesses or disabilities. Wallace et al. (2007) mention that individuals cannot take their medications on an empty stomach. However, if seniors then buy food, they are less likely to purchase their medication due to the lack of funds. Therefore, these seniors are not able to take their medicine either way.

Brewer et al. (2010) found similar patterns when interviewing individuals aged 50 and older (N=621) living in Georgia when specifically examining the food insecurity-obesity paradox. The food insecurity-obesity paradox is when food insecure individuals develop unhealthy diets because less healthy foods are easier to afford. Therefore, the individuals gain weight from these diets. Brewer et al. (2010) found that individuals who were food insecure were more likely to experience health issues, specifically weight-related disability, arthritis and joint pain. These findings are similar to Wallace et al.'s (2007) sample in California because physical disability was prevalent in those who were food insecure. However, it is not clear what begins first—food insecurity or disability. Auslander & White (2009) believe that seniors aged 60 and older experience psychosocial effects from malnutrition that mimic that of Alzheimer's and other illnesses. Because of these symptoms, it is believed that these seniors are misdiagnosed with diseases and medicated when what they really need is proper nourishment. Therefore, some of these individuals are paying money for prescribed medications that they may not need, while still trying to afford the rest of their living expenses, including food (Jordan 2007).

National research indicates that older females are experiencing higher rates of food insecurity as compared to older males (Ziliak & Gunderson 2008; Ziliak & Gunderson 2009;

Ziliak & Gundersen 2011; Ziliak & Gundersen 2013). While little is known on why older females experience food insecurity more than their male counterparts, it might simply be that women have a longer life expectancy than men and therefore are more at risk. More specifically, women are living longer with limited funds. Typically, if they are retired, women are living off of lower lifetime earnings due to the wage gap between women and men. But some women are living solely off of Social Security benefits because they never held a career. Additionally, most elderly women are widows, which means that they do not have a dual income coming into the household.

Additionally, although food insecurity had increased among all age demographics in 2007 (Ziliak & Gundersen 2011), researchers have found that seniors below the age of 69 or the “young old” are those who face the most problems with food insecurity (“Learn About Hunger” 2013; Wallace et al. 2007; Ziliak & Gundersen 2011; Ziliak & Gundersen 2013). A reason for this is because the Baby Boomers are getting older, so the “young old” population is bigger than the one before it, and therefore, food insecurity among this population cohort is increasing. Moreover, as seniors age, the rate of food insecurity experienced actually decreases (AbuSabha et al. 2011; Ziliak & Gundersen 2013), but no study addresses why this age disparity exists, even though it is mentioned as something that should be examined (AbuSabha et al. 2011) However, it is important to note that this rate might change as the Baby Boomers cohort ages.

Previous research has found a relationship between the race of elderly persons and their level of food security. Older adults who identify themselves as Black or Hispanic experience food insecurity at higher rates in the United States when compared to their White counterparts (Ziliak & Gundersen 2011; Ziliak & Gundersen 2013). Both Black and Hispanic seniors face food insecurity at a rate that is more than double the amount faced by White seniors (Ziliak &

Gundersen 2013). While rates of food insecurity are expected to increase among all races and ethnicities, it is projected that Black and Hispanic seniors will be more likely to continue to experience it in comparison to their White counterparts. However, while national data supports this, there is no research suggesting why Black and Hispanic elders will continue experience food insecurity more than other races and ethnicities.

In relation to elders living with grandchildren in the household, research suggests that seniors living with at least one grandchild are more likely to face higher rates of food insecurity than those who do not live with any grandchildren (Higgins et al. 2010; Johnson et al. 2011; Ziliak & Gundersen 2008; Ziliak & Gundersen 2009; Ziliak & Gundersen 2013). This is because older adults often have very limited resources, so when a lack of resources is combined with caring for another human being, the risk of hunger increases, and changes in food patterns occur for all involved. Moreover, the trend of grandparents being caregivers to their grandchildren is increasing in the United States (Higgins & Murray 2010). In a recent study, 16.8 percent of grandparents living with a grandchild in Kansas experienced food insecurity at a higher level than those who did not have a grandchild present. The percentage of grandparents living with a grandchild in Kansas surpassed both the state's (4.6 percent) and national average (15.4 percent) (Higgins & Murray 2010). Higgins & Murray (2010) also found that having a grandchild present in the household negatively impacted the dietary choices made by the grandparent. This is problematic because seniors are already at risk for declining health, and without the proper nutrients, that risk increases. While there has been research conducted on grandparents as caregivers and poverty experienced, there is no research examining the specific race, age, or the gender of these grandparents, just the fact that they are caring for a grandchild.



Research also indicates that while seniors living below the poverty line experience food insecurity at higher rates than those above the poverty line, in a recent national report two-thirds of the United States' senior population experienced food insecurity while living above the poverty line (Finegold et al. 2008; Ziliak & Gundersen 2013). Ziliak & Gundersen (2013) suggest that this finding represents those that are in need of food resources, but are denied because they live above the poverty level and therefore receive no services to assist them in acquiring food.

### Location

According to Feeding America, seniors are more likely to face hunger in America if they live in a southern state ("Senior Hunger" 2013). In the most recent report regarding geographic location of food insecurity in the United States, Ziliak & Gundersen (2009) found that seniors living in southern states are more than two times as likely to experience food insecurity when compared to the regions of the Northeast, West, and Midwest. In 2012, Florida ranked first in having the highest elderly population in the country (Florida Department of Elder Affairs 2012; "The Hidden Hungry" 2012). Currently, the state of Florida is one of the Top 10 states that have the highest rates of hunger among its senior population ("Senior Hunger State by State" 2013; "Senior Report" 2013).

In Central Florida, The Florida Department of Elder Affairs examined the senior population in Brevard, Orange, Osceola, and Seminole counties. In 2011, these areas had a senior population aged 60 and older of 437,190. A majority of the population were female (55%) and White (82.4%). 14.5% of senior individuals reported being Hispanic. Of the seniors living in these areas, 21.9% of older individuals were living alone and 6.1% of the senior population were living with at least one grandchild. When examining financial status of those aged 60 and older,

approximately 12.9% of seniors were living at or below 125% of the poverty line with 8.2% individuals 60+ being participants of food stamps, while 12.9% are eligible. Furthermore in relation to mobility, only 21.2% of senior residents ages 60 and older in these areas reported having a Florida driver's license. Additionally, 11.4% senior residents had at least one type of disability and 13.9% reported having two or more disabilities (2011 Florida PSA Profiles 2011). Thus, research suggests that seniors in living in Central Florida are at risk to experience food insecurity. In Central Florida, not only are individuals not using programs they are eligible for, such as food stamps, but there can be a hindrance in mobility to obtain or to receive food, with only a small percentage having driver's license and many citizens living life with a disability (2011 Florida PSA Profiles 2011). Moreover, there are 6.1% of senior individuals who live with grandchildren, which previous research has shown increases the rate of food insecurity of seniors (Higgins et al. 2010; Johnson et al. 2011; Ziliak & Gundersen 2008; Ziliak & Gundersen 2009; Ziliak & Gundersen 2013).

Recently, Orlando's mayor, Buddy Dyer, has called attention to what AARP has labeled "the epidemic of senior hunger" (Santich 2013). A recent news article reported that Orlando has approximately 12,000 residents aged 55 and older experiencing food insecurity (Santich 2013), with an estimated 8,000 going hungry everyday ("Study Reveals" 2013). In Central Florida, the Meals on Wheels program gives meals to about 1,000 seniors per week, with over 1,100 senior residents on the waiting list ("Study Reveals" 2013). The latter is the study population proposed for my research.

## Meals on Wheels Program

This study focuses on the elders on the waiting list for the Meals on Wheels Program in Central Florida. Seniors First houses the Meals on Wheels program of Central Florida and offers other services to assist seniors with obtaining food and other everyday tasks. Meals on Wheels of America first began in the 1950s in Philadelphia, and later started receiving federal funding under the Older Americans Act (OAA) in 1972. While undergoing a name change in 1976, the name of the program changed back in 1998 to the Meals on Wheels Association of America (MOWAA). The focus of the program was to provide home delivered and congregate meals to seniors in need (“The History of Meals on Wheels” 2013).

In the 2000s the program had developed programs within MOWAA to get others involved in the mission to end senior food insecurity. In 2002, March for Wheels began to raise awareness and educate the nation on the issue of senior food insecurity and to raise funds. In March of 2006, the program started Mayors for Meals Day, which has local government officials partake in the delivering of meals to seniors in the community on a selected day in March. In 2013, over 1500 elected officials and community leaders participated—the highest number since the program started in 2006 (“The History of Meals on Wheels” 2013).

In 2009 MOWAA officially announced their mission to end senior food insecurity in America by 2020 in their Pledge to End Senior Hunger campaign. By 2011, MOWAA partnered with the Administration on Aging (AoA) to develop the National Resource Center on Nutrition and Healthy Aging. This resource is intended to assist the national aging network of local and state agencies that have programs of aging clients to implement the nutrition portions set forth by the Older Americans Act. In 2012, MOWAA celebrated its 40<sup>th</sup> anniversary (“The History of Meals on Wheels” 2013).

Locally, a non-profit organization, Seniors First, is in charge of the Meals on Wheels program in Central Florida. Aside from delivering warm, nutritious meals, the program also assigns individuals Care Managers. The role of the Care Managers is to assess their clients' needs and to provide monthly check ups to ensure that their clients are healthy and well. Trained staff also provides assistance in home repairs and light housekeeping. The Neighborhood Lunch Program with Transportation is also a part of the program that serves as a congregate meal and social event for seniors held at different local lunch sites. Additional services to clients are Stepping Stone Medical Equipment Bank and the Guardianship program. The Stepping Stone program gives refurbished medical equipment to seniors, such as canes, electric scooters, and electric scooter wheels for free or at a discounted rate. Previous research has noted the impact that a physical disability has on food security (Wallace et al. 2007; Brewer et al. 2010), so assisting seniors with their mobility issues potentially helps them be more food secure. The Guardianship program assists with food security as well because it assigns someone to care for elders who are legally deemed as not being able to care for themselves anymore, which includes preparing meals for them.

Currently there are over 1000 people on the Meals on Wheels waiting list in Central Florida, with approximately 200 being designated as high-priority in Orange County alone. Some have been on the wait list for a couple of days, while others have been waiting as long as 8 years. Since there is such a large number of people needing assistance, Meals on Wheels of Central Florida has developed a new system. Instead of visiting each home to see the potential clients, Seniors First now conducts telephone assessments to see if the seniors are high-priority or low-priority when it comes to food insecurity. The difference between low-priority and high-priority clients is based on how they score on an 8-question assessment given via telephone, where points

are assigned to specific answer choices. This assessment includes questions regarding eating habits, ability to purchase food, health issues to see if their food insecurity is caused by lack of finances, physical or mental health issues, or lack of transportation. If an elderly individual scores between 3-5 points on this assessment, they are considered to have low food security. If an elderly individual scores between 6-13 points on this assessment, they are considered to have very low food security. Both of these groups, low food security and very low food security, are considered high-priority. If they are high-priority, then a Care Manager will do a home visit to assess the need of the client in regards to food and other services they may need. In addition to demographic questions, the assessment asks questions about clients' residence status, income, medical needs, needs regarding errands and everyday tasks, as well as their eating habits and ability to obtain and prepare food.

### Barriers

As mentioned previously, elderly persons who are more likely to experience food insecurity are seniors with physical disabilities, individuals of the "young old" population, and those who are living just above the poverty line (Ziliak & Gundersen 2013). These characteristics alone present barriers when trying to use resources to obtain food, which is why it is important for service providers to understand barriers faced by the senior population so they can serve those in need.

Receiving benefits for food supplementation typically requires mobility, which proves to be difficult with seniors who have either a physical disability or no driver's license (Wolfe et al. 2003). A participant of food programs not only must be present to receive the food, but he or she typically must go to a location to file paperwork to even start receiving the benefits.

Additionally, once participants receive food, they might have a difficult time preparing it depending on their level of mobility.

Also, eligibility requirements for food programs usually include being aged 60 or 65 and older. However, this can be problematic for the new “young old” population experiencing food insecurity. Therefore, individuals must find alternative measures to obtain food, but it still might not be enough. Eligibility requirements also include where an individual falls below the poverty line. However, national research indicates that there is a large population of seniors facing hunger that live above the poverty line (Ziliak & Gundersen 2013). Because many seniors live above but close to the poverty line, they are unable to apply for certain assistance programs that would aid in food acquisition, and therefore, be left with not enough to eat.

AbuSabha et al. (2011) discuss another barrier facing the senior population: paperwork. As mentioned previously, in order to receive benefits one must typically go to a distribution site or office to fill out paperwork or to register. If one has mobility issues or cannot find transportation, then the likelihood that one would be able to go to one of these site or offices is low. Furthermore, if the amount of paperwork was not an issue, the font size and amount of writing could be difficult for an individual in the older senior population. Additionally, if a senior is a member of a household and wants to receive benefits such as SNAP, then not only would a member of the household have to go to the office to fill out paperwork and answer income and resource questions, but site visits and interviews must take place before that senior receives an EBT card. The process alone could deter families from completing the first step for eligibility.

Jordan (2007) also argues that some programs, such as the Thrifty Food Plan (TFP) in Seattle, have requirements of participants when they are enrolled to receive benefits. This

specific program not only involves a copious amount of paperwork to receive benefits, but also requires that participants spend an average of 3.5 hours per day preparing food. However, some seniors find this difficult and are unable to complete this task because even if they do not have a physical disability, they find it hard to stand for long periods of time (Jordan 2007; Wolfe et al. 2003).

## **SAMPLE & METHODS**

Data for this study were derived from semi-structured, face-to-face interviews with people on the Meals on Wheels of Orange County's waiting list. Working collaboratively with Seniors First, potential participants that met the study's requirements (being on the Meals on Wheels waiting list) were identified and asked if they would like to participate in the interview. Currently (as of March 2014) there are 432 individuals aged 60 and older on Orange County's Meals on Wheels waiting list. My sample includes three couples and fifteen individuals for a total sample of twenty-one people and eighteen total interviews. Because of the different populations, I examined couples separately from individuals.

Those who participated in the research study were given two totes; one bag consisted of non-perishable foods from Seniors First's on-site food pantry and the other bag included bath towels and soaps collected during a community holiday drive for Seniors First. In addition to demographic questions, the interview schedule included questions regarding nutrition, how participants obtain food, which other programs, if any, the individuals are currently enrolled in, access to these programs, and barriers they may face when using food assistance programs or when generally obtaining or preparing food (see Appendix C). The interviews were audio recorded and later transcribed to be analyzed and coded for themes. Specific data regarding demographic information were statistically analyzed in SPSS.



## FINDINGS

### Demographics of Participants

In all, six individuals made up three heterosexual couples who participated in this study. The average age of the participants who were couples was 80 years old, with a range of 75- 82 years old. The race/ethnicities of the couples were 100% White, non-Hispanic. The average monthly income for the couples waiting was \$1576. The time spent on the waiting list for the couples ranged from 6 months to 2 years 9 months, with an average waiting time of 1 year 4 months.

For individuals, the average age of the participants was 76 years old, with a range of 62- 93 years old. 47% of the individuals were female and 53% were male. The race/ ethnicities of the individuals were 53% of individuals identified as White, Non-Hispanic and 47% of individuals identified as Black, Non-Hispanic. The average monthly income for individuals was \$1146.33 (range \$659 to \$2,200). The time spent on the waiting list for the individuals ranged from 2 months to 2 years 3 months, with an average waiting time of 1 year.

### Couples

#### *Cause of Food Insecurity*

All of the couples stated that finances are the main cause of their food insecurity. None of the couples use any other types of meal services such as food pantries or soup kitchens because they are unaware of these resources, which leaves grocery stores as the only viable resource for these couples to use to obtain food. The couples discussed how the cost of food is an issue, and the strategies they use to make sure they get the best deal when purchasing food. All couples

explained how they mainly shop in the Buy One Get One area of the stores, and clip coupons if they can. Unfortunately, one couple would like to use coupons to save on food, but they cannot because they have failing eye sight and have had numerous eye surgeries. One couple receives \$62 a month in food stamps to use, but they say that it does not go far and that the amount of food stamps they receive keeps getting cut. Another couple has a daughter with special needs, who is unemployed living with them. They use her food stamps as a source to get by. All of the couples rely on SSI as their main source of income, with one couple also receiving small pensions with their SSI checks. Even with these strategies to help with purchasing food, all of the couples feel that they do not get enough food when going to the grocery store, and even sometimes have cut back in the amount of the food they get at the end of the month while they wait for their next checks to come in.

The couples also mentioned that transportation is an issue for them due to health issues. Even though all of the couples own a car, they all have issues in using their cars to go to the grocery stores. Due to mobility issues, two couples have difficulty driving their cars. The third couple, Janet<sup>1</sup> and George, mention that they cannot drive at all due to the lack of clear sight, so their daughter drives the husband to the store because he is more mobile than his wife. Even though these couples mentioned that transportation is an issue, they believe their main cause of food insecurity is finances.

### *Preparing meals*

Preparing meals proved difficult for all of the couples, mainly due to health/mobility issues. Despite American gender roles, the husbands took on the role of cooking meals because

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<sup>1</sup> All names are pseudonyms to protect participants' privacy.

the wives had health issues that made them either immobile or made it difficult to cook. For example, Sherri receives dialysis three times a week for four hours at a time. While Tom describes Sherri as the most positive person you will ever meet despite what she goes through, the fistula in her arm leaks often, which makes it difficult to prepare and cook food. George also has glowing remarks to say about his wife, but for the past couple of years Janet has been immobile, and has trouble even dressing herself. Because of this, George is in charge of everything around the household including preparing meals and purchasing food. Even though Janet and George have a daughter living with them, she is not capable of cooking given her disability.

### *Nutrition*

Two out of three couples stated that they do skip meals. More specifically, one couple mentioned that they skip meals a few times a week, and the other has skipped meals a few times a month. However, the other couple mentioned that while they do not skip meals, they only eat a little something as a filler, and therefore, it is not a full meal. When asked whether they feel that they eat nutritious, balanced meals, two couples said that they sometimes do, and the other couple said that they always do. However, I have found some discrepancies with the couples' answers to this question and the actual foods they eat. Additionally, when asked if cost, choice or access was the reason why the couples ate the foods that they consumed, the cost of the foods was reported as the main reason.

For example, Rose and John believed that they always eat nutritious balanced meals; however, they mainly eat beans and peas or something out of a can. They did mention that they like pork and chicken, but did not say how often they are able to have these foods. Moreover, I did not see a stove or a grill to cook these products, only a microwave. Sherri and Tom said that

they sometimes eat nutritious, balanced meals; they both try to eat food such as, chicken, tuna fish, turkey, and salmon, but mainly they find themselves eating pizza. Tom said, “We might be getting nutrition, but not the right nutrition, you know? I mean calories, just calories, no nutrition.” Janet and George have a similar outlook on their food as Sherri and Tom; they believe sometimes that they eat nutritious, balanced meals, but not necessarily getting the nutrition that they need. More specifically, in Janet’s and George’s situation, they eat foods that they are not supposed to eat because of health reasons, but do so because that is what they can afford and able to fix for themselves. George said:

“We have pancakes, French toast, and stuff that aren’t good for us because we have sugar diabetes. But if we don’t want to starve we have to eat something. We have had a lot of fried potatoes and gravy and biscuits. And we are supposed to stay away from that stuff, too. I try to get things that I can fix for all of us. Things that are easy to fix. I used to buy a lot of frozen dinners. All you have to do is put them in the microwave. We’re not supposed to eat those, but they are quick and easy to fix. So I try to get things that are easy to fix and as much as a variety as they can have. I try to get some fruit—the wife likes pears, but we don’t get that as often as we should. Fruit and veggies we get are grapes, pears, and bananas. That’s it. For veggies—lettuce, tomatoes, and onions to go in a tossed salad. And we would buy other fruits and veggies, but we do not have the money for them because they are more expensive.”

### *Social Support*

In terms of social support, two of the couples have some sort of social support. One of the couples have a son, daughter-in-law and grandson that will go to the grocery store for them if they need anything. The other couple with social support has their daughter living with them. While she does not make any food herself, she is able to drive her father to the grocery store to get food. Otherwise, this couple would have no transportation to get to the grocery store. The daughter also receives food stamps. While it is not much, the food stamps are helpful when buying food. Both of the couples mentioned that their sources for social support are very reliable

and timely. The couple with no social support does not have any relatives nearby, but believes that they have good neighbors, so if they needed anything their neighbors would help.

### Individuals

#### *Cause of Food Insecurity*

For a majority of the individuals (66.7%), the main cause of food insecurity is finances, meaning that for one-third of the individuals, the cause was something else. Other causes of food insecurity among the individuals were transportation (20%) and health/mobility (13.3%). However, 60% of the individuals who had reported finances as their main cause of food insecurity had an additional cause to their food insecurity relating to transportation or health/mobility. While all of the individuals purchase food at the local grocery store, 20% of the individuals use food pantries as a way to supplement the food that they purchase and 80% of the individuals do not use any type of meal service because they are unaware of the location of these types of food services in the area.

The individuals (3/15) who use food pantries as a resource are very grateful for the fact that they can supplement their grocery store food supply. However, all of the individuals use social support to get foods from these establishments. Adeline is unable to go anywhere, so her daughter goes to three churches nearby for some of their food. Samuel can only go to the three food pantries he uses only if a friend can drive him to the locations, which are nearly an hour away. Additionally, these locations have different times of operation; one food pantry is only open once every six months, and the other two are open once a week. However, he cannot necessarily go every week because he tries to work side jobs for some extra income. Ron lives with his partner, Henry, who is ineligible for Meals on Wheels because he is under the age of

60<sup>2</sup>. He does not have any transportation, and is unable to stand for a long amount of time, so his neighbor goes to the food pantry for them. While they all appreciate the food given to them, they all discussed the fact that most of the foods given to them from the food pantries is expired. They also wish that the food pantries would offer fresh fruits and vegetables for adequate nutrition.

All of the individuals use grocery stores as a way to obtain food. Because the grocery store is the only known location to get food to many of the participants (12/15), the individuals discussed frugal tactics that they use when purchasing food to save money. The individuals typically just get what they need and avoid purchasing any “foolishness.” They also search for sales, whether it is Buy One Get One or using coupons. One individual even went online to check which items were on sale that week and made his shopping list based off of the best deals. As I was talking with Barbara, a sweet 91 year old woman with silver curls who must use a walker, she explained:

“You run out of things. You don’t like to, but you do. I grew up during the Great Depression, and I have four sisters. We never went hungry, my mother made a lot of casseroles, but they were very frugal and meticulous with money. So I grew up in a thrifty environment. You just make it stretch.”

Many of her waiting list counterparts understood this notion of “making it stretch,” and do not believe they get enough food from all of their resources. Most of the individuals (40%) said that they often worry that their food would run out before they could obtain more, even if they do supplement with food pantries. This “stretch” is associated with other monetary obligations of these seniors. For example, Robert, a tall, frail, 64 year old man who mentioned that he was embarrassed by his situation, faced a battle between medication cost and purchasing food.

“Most of my medications are expensive, and I have to choose between food and getting my medications. And I find out I choose medication over food. And I need to take food

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<sup>2</sup> I have labeled Ron as an individual in this study because his partner is ineligible for Meals on Wheels due to his age. Therefore, while a couple, only one of them is on the waiting list.

with my medication. I try to balance, but I'm in between a hammer and a hard place. I would love to have food, and I would love to have my medication. But I have to make a decision."

This supports previous literature (Wallace et al. 2007) that elders must choose between purchasing their medications and buying food because of the costs associated with both.

Eight individuals do receive food stamps every month as a means to purchase food (53.3%). Their benefit ranges from \$15 to \$150, averaging approximately \$101 or a little more than \$3 for food a day. All of the individuals who received food stamps mentioned that the amount given to them keeps getting cut. The type of income received by a majority of the individuals is SSI, but a few also receive a small amount of retirement, earned income from side jobs, or a small amount of money (\$10) from Veteran's Affairs<sup>3</sup>. Also, a majority of the participants (13/15) have their medications paid for. This coverage helps lessen the burden that Robert had mentioned.

### *Preparing Meals*

Preparing meals proved challenging for the majority of the individuals (80%), mainly due to health/mobility issues. Most of the individuals (40%) have issues with standing for long periods of time. In order to prepare and cook meals, these individuals try to cook a little bit at a time and then sit down for a short length of time before getting back up to continue cooking. One of these individuals, Barbara, uses a walker, so it is hard for her to move around and reach for pots and pans. Therefore, she heats up microwaveable meals instead of cooking. Darla, who suffered from a stroke nine years ago, cannot move the left side of her upper body. This makes it difficult for her to cook meals on the stove, which is why she mainly eats microwavable dinners. Due to knee replacement surgeries, Anna and Rhonda are unable to move around a lot. The lack

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<sup>3</sup> Only one participant had received this funding from Veteran's Affairs because there was only one veteran in the study.

of mobility deters Anna from cooking at all, and Rhonda tries to prepare meals in her slow cooker so that it can do the cooking for her. Marcy has terrible arthritis that makes it difficult for her to hold objects, such as pots and pans. She also wears oxygen and does not like to cook by fire with it on. Therefore, she takes it off and cannot breathe well when using the stove. Adeline has tried to cook several times in her older age, but showed me the burn marks all over her arms from her attempts. Therefore, her daughter cooks for her. And finally, Mark has stomach pains from time to time and does not like to cook when he is in pain.

### *Nutrition*

Approximately 53% of the individuals do not skip meals. However, what is considered “meals” had led to over reporting of this question. In fact, 50% of those who “do not skip meals” said that while they might not have a meal, they will eat something to “fill the emptiness” throughout the day or eat less to make their food go farther. Therefore, they are still not getting three square meals a day. The remainder of individuals skips meals a few times a month (13.3%), about once a week (13.3%), a few times a week (13.3%), and nearly every day (6.7%). When asked if they feel that they eat nutritious, balanced meals, 60% of individuals said that they sometimes do, while 20% said that they never do and the remaining 20% said that they often do<sup>4</sup>. However, I have found some discrepancies with the individuals’ answers to this question and the actual foods they eat. Additionally, the cost of the foods were the main reason why the individuals ate these specific foods (73.3%) when compared to access (13.3%) and choice (13.3%).

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<sup>4</sup> The three answer choices were: often, sometimes, or never.



For example, Marcy believed that she always eats balanced, nutritious meals, however, her typical day of meals is oatmeal for breakfast, toast for lunch, and a baked potato for dinner. Sometimes she will have a can of vegetables or pick from a ham that has been in her freezer since Christmas. She also claims that she eats these foods every day because it is what she can afford, and therefore, has no variety. Robert discussed similar issues as he explained his typical day of meals; a smoothie made with food, milk, and oatmeal for breakfast, something that he can have leftovers for the whole week for lunch, and crackers and cheese for dinner. As much as Robert said that he would like variety because he does not enjoy eating the same foods every day, he explained that he does not have a choice. Robert went on to say:

“I’m in a stage where I’m cornered. By cornered I mean I have no choice. It’s just where I am and I do what I do because I have no better choice. I think this country has forgotten the elders. We gave so much because there was a time I was very productive, and I didn’t have to depend on anyone for anything. I didn’t think I would get to that stage, but it happened to me to the point where I need help, and help is not available. I don’t think it’s right, I don’t think it’s fair, and I’m pretty sure I’m not the only one under these circumstances. This is not right.”

Adeline also spoke about how there were foods that she wishes she could have but cannot afford, such as lamb. Adeline spends her days eating cereal, mashed potatoes and gravy, and chicken if she is lucky. When asked if she eats these foods because of choice, how much they cost, or because of access, she said, “To live—just to live.” Barbara is similar, in that she is supposed to watch her salt and sugar intake, but can only afford certain foods so she eats food that she is technically not supposed to have just so she can survive.

### *Social Support*

In terms of social support, six individuals have someone else, either a relative or a partner, living with them who are not eligible for Meals on Wheels due to their ages. In all, 93%

of the individuals (14/15) have some sort of social support. The types of support these individuals have are neighbors or friends or relatives. Even though a majority of the individuals in this study had social support, not all of them were able to rely on their sources for extra help. More specifically, these individuals have a strong dependence on their sources for support, and find themselves in a bind if their neighbors, friends or relatives are unavailable.

Neighbors and friends offer help to many of these individuals. Barbara relies on her neighbor to drive her to the grocery store to get food. She also has a friend from church that will come to her house and drop off cooked meals for her time to time. Her sisters are very busy and are unable to help her often, and sometimes, her neighbor and friend are not able to help out because of their own obligations. Barbara mentioned:

“My neighbor is reliable but has commitments himself. He’s retired, and we’ve been neighbors for over 50 years, and he has appointments and he and his wife visits their son for a couple a weeks at a time. Sometimes my sister will help, but her husband is an invalid, so she has her hands full. She can’t leave him alone. So I cannot rely on her. My other sister is a crossing guard and is not available because of her work schedule. She’s also not able to drive at night, so she cannot really help. My other sister lives kind of far away and is not available.”

Ron has a similar issue. He has no transportation to get food and cannot stand for long periods of time, so his neighbor goes to the local church to get him food from the food pantry. Ron says, “He’s hard to do without.” Ron and his partner fear that the next few months will be very difficult for them because the neighbor is going to be out of town helping his daughter with some medical issues. Because of this change, Ron and Henry will have to do without a major food source that they typically have to supplement the food they purchase at Wal-Mart. One individual received social support from far away. Marcy has a friend who lives in the Midwest, and they have been friends for years. Marcy does not have any family members alive to help her, so her friend calls the local grocery store chain to send Marcy a gift card time to time. She also

had a ham delivered to her over the holidays. The ham has lasted Marcy a long time, as she has picked at it everyday for the past two months. James, who is 69 year old and is very immobile, has a neighbor he calls “his babysitter” who comes over everyday to check up on him. He does not give him any food though. James lives in a room he rents out in a house. The owner does not live there, but comes over every Sunday with food for James and the other people who live there. While he pays for the food, James is limited in what food he has by only being able to eat the foods he has access to. These foods are typically non perishable, and not fresh.

Relatives also play an important role in some of these individuals’ lives. Rhonda is grateful that her son lives with her because aside from her sixth recent knee replacement, she is also caring for her brother who is blind and schizophrenic. Her son is able to go to the store a pick up food every once in a while, and her daughter also visits and takes Rhonda to the grocery store because she cannot drive herself. But another person living there means there are more mouths to feed. They often “sacrifice and make sure to pick out things that will last.” Adeline is also thankful that her daughter lives with her because she cannot drive and she is unable to cook. She also cannot go shopping because she often “gets lost” in the grocery store. Her daughter also visits three local food pantries to add to their food supply. Even though it is still not enough food to last, it would be difficult to obtain and prepare meals without her daughter. Coretta’s relatives do not live with her, but have always made it a point to “check up” on her weekly after she had her heart attack. She also has passing out spells that concern her children. Because she lives alone with no transportation, and it is difficult for her to stand, her children come by weekly with food for her and sometimes help her cook meals.

Only one individual interviewed did not have any social support (1/15). But that is just for this specific sample of individuals, and does not translate to how many people on the waiting

list have no social support. Robert has no children and has siblings that live four hours away or out of the country. While he has transportation, he lacks finances to be able to pay for all of his expenses and food. Not only does he not know of any other resources other than Meals on Wheels to assist him, but also he believes that the paperwork for most services is cumbersome and the people who work there scrutinize clients. He said, “Whatever is left of my dignity I want to keep.”

## DISCUSSION

Seniors are in dire need to receive home delivered meals. Finances are the main reason why both couples and individuals are unable to have enough food. Only one individual was able to physically work at a temporary job, leaving the rest in the sample unable to make a side income to help pay for food. Because of the lack of funds, these seniors were forced to choose certain foods to eat based on cost and shelf life rather than because it was what they wanted to eat. Some individuals also felt cornered and torn between purchasing food or their medications, both of which are crucial to prolong the good health of these seniors. Aside from finances, most seniors had other reasons why they were food insecure; these reasons were typically a lack of transportation or a lack of physical mobility.

Preparing meals proved difficult for many of the participants in this study. With older age come more medical issues that affect both physical mobility and mental keenness (Wallace et al. 2007; Auslander & White 2009; Brewer et al. 2010). While the participants had strategies to still prepare meals (i.e. take sitting breaks while cooking), it is not known if these strategies will continue to work as they age. A solution to avoiding having to cook meals for these seniors is to purchase foods that are easy to make (i.e. yogurt, crackers, toast, and microwavable dinners). However, eating these types of foods on a daily basis does not give these seniors the proper nutrition they need, which in the end, exacerbates their medical conditions.

Seniors are most at risk for nutritional deficiency (Brownie 2006). More specifically, a lack of nutrition puts seniors at higher risk for “cardiac problems, infections, deep venous thrombosis and pressure ulcers, perioperative mortality and multiorgan failure” (Brownie 2006). Previous studies have revealed that older seniors living alone often eat less and are at higher risk for poor nutritional health (Darnton-Hill 1992; Mion et al. 1994). In 2007, Tufts University

researchers modified the USDA's Food Guide Pyramid for Older Adults (see Appendix B) to match the new food pyramid, known as MyPyramid. Under this food guide, "older adults need fewer calories but more nutrients (i.e. fortified grains, whole wheat bread, bright-colored vegetables, and deep-colored fruit) to fulfill their unique dietary needs" (Lichtenstein et al. 2008). While some of the couples and individuals interviewed believed that they ate nutritionally balanced meals, when they discussed what meals they eat daily, these meals were not necessarily nutritionally adequate. According to Millward (2008), "The key to health and active longevity may be sufficient appropriate exercise and healthy eating to ensure adequate intakes of protein and most other key nutrients to maintain muscle and bone strength and mobility." It would benefit these seniors to receive home delivered meals because the foods included in these meals are approved by the Food and Drug Administration (FDA) and follow nutritional guidelines specific to aging seniors. In fact, one of the participants, Coretta, started receiving the home delivered meals the week I interviewed her. She said, "The meals are definitely more nutritious and easier to prepare than stuff I could make."

The impact of social support is crucial for the survival of these seniors. Most of the seniors a part of this study had some sort of social support. However, this does not correlate to how many seniors on the waiting list that have help. In this study, because these seniors were very dependent on their support systems, I do not see how they would be able to get the food supply that they currently have without their friends, family and neighbors. According to Ramic et al. (2011), there is an increased risk of malnutrition among elders who live alone; these seniors often reduce the number of daily meals, and have a lower intake of protein and nutrients compared to elders living in a family environment. Therefore, a home delivered meal service

would not only benefit these seniors by allowing them to eat nutritious, balanced meals, but also by the human interaction they would have with the volunteers dropping off their meals.

## CONCLUSION AND IMPLICATIONS

The demand for home delivered meals surpasses the supply. Currently, the largest generation in American history, the Baby Boomers, is aging. Due to medical advancements, researchers have found that people in America are living longer than ever before, including seniors (Stewart et al. 2013). Because of the “Graying of America” and the longer life expectancy of current seniors, the need for home delivered meals will continue to increase. Both medical advancements and proper nutrition also allow these seniors to live more independent lives, which decreases the amount of seniors in need of assisted living resources.

If seniors are able to live by themselves, it is cheaper to get home delivered meals than residing in a nursing home. In Florida, the annual average cost of a private nursing home is \$93,440 (Florida Health Care Association 2013). Because finances were the main cause of food insecurity among seniors in this research study, meal programs are a viable solution to end senior hunger. Even when these seniors had support from family members, none of it was financial, which may mean that a nursing home room is not a feasible option for some families. If health insurance or the government were to pay for nursing home services, they would still be spending more money than providing three home delivered meals to a senior daily, which is approximately \$7,117.50 a year<sup>5</sup>.

There needs to be more funding given to home delivered meal programs. For many seniors, receiving home delivered meals is not for convenience, but rather, survival. Betty, a 75-year-old mother of two daughters and a widow of a former military officer, said:

“I just feel bad because I know that in order to get the MOW you must be in dire need. And that’s not right because we’ve put in a lot for years, and years, and years—you

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<sup>5</sup> This number is derived from a single meal cost \$6.50. This number multiplied by 3 meals a day, then by 365 equals \$7,117.50.



should be able to get a little bit out of the system. I don't think they owe me that, but it would be the generous thing to do. They spend so much money on other things that are stupid to me, but I'm not the government."

Marcy had similar sentiments, in the sense that home delivered meals are an actual need.

Knowing that it was not Meals on Wheels fault, but rather the lack of government funding, she mentioned, "We don't ask for it because you want to, but because you need to. I told someone the other day that I'll be dead before I get Meals On Wheels." With more funding given to home delivered meal programs, seniors can get the nutrition that they need, which will let them lead a longer, productive life.

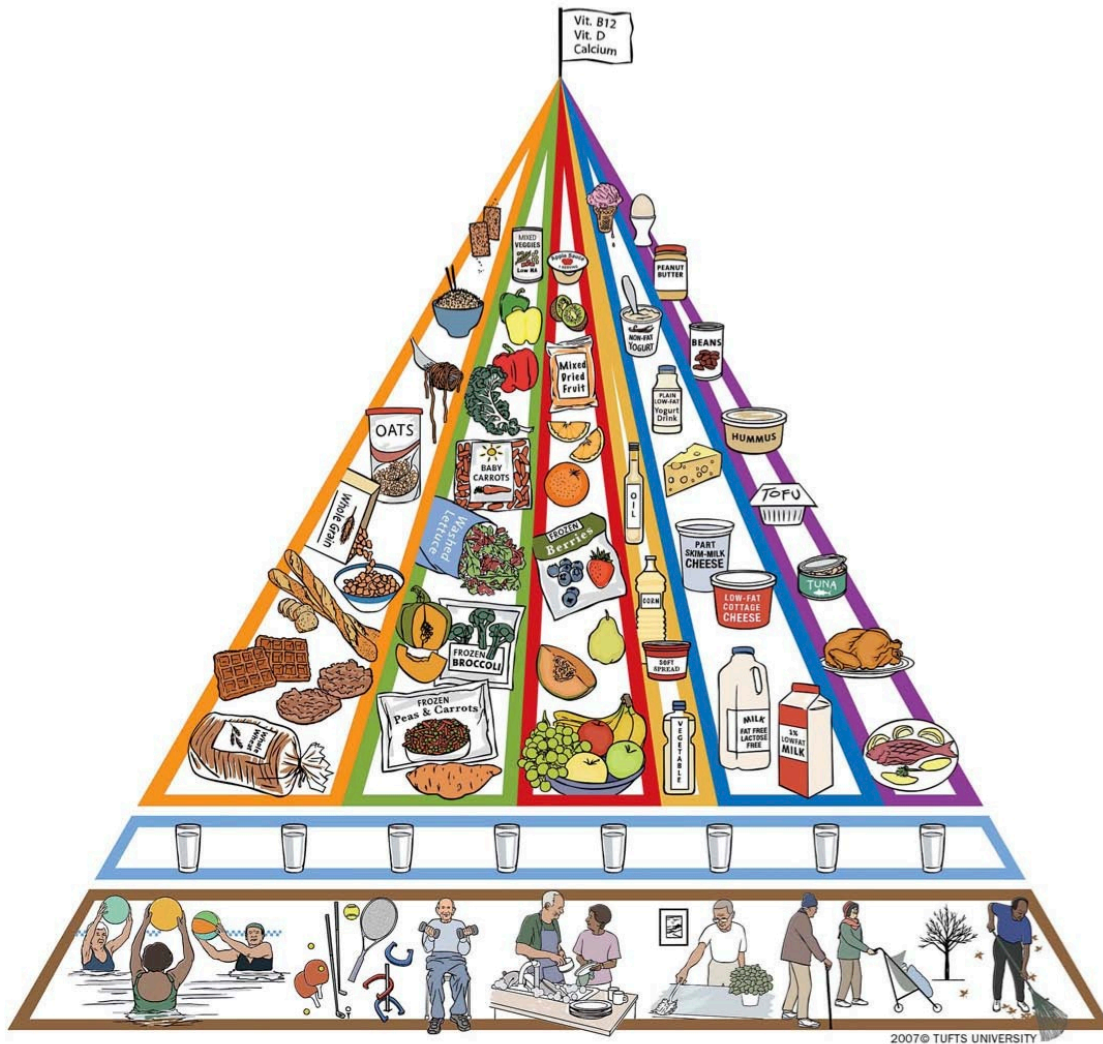
**APPENDIX A: TABLE 1**

**Table 1: Demographics of Participants**

<b>Couples</b>		
Average Age		80
Gender		
Male		50%
Female		50%
Race		
White		100%
Hispanic		0%
Average Monthly Income		\$1,576
Average Time Spent on Waiting List		1 yr. 4 mths
<b>Individuals</b>		
Average Age		76
Gender		
Male		53.3%
Female		46.7%
Race		
White		53.3%
Black		46.7%
Hispanic		0%
Average Monthly Income		\$1,146
Average Time Spent on Waiting List		1 yr.

## **APPENDIX B: FOOD PYRAMID FOR OLDER ADULTS**

## Modified MyPyramid for Older Adults



## **APPENDIX C: INTERVIEW SCHEDULE**

## Interview Schedule

### Information by Seniors First:

Participant's Gender:            Male            Female

Participant's age: \_\_\_\_\_

Participant's race:            White            Black            Asian            Other

Are you Hispanic?            No            Yes

How long the individual has been on the waiting list for: \_\_\_\_\_ in months

Average monthly income: \_\_\_\_\_

### Questions:

1. Do you live alone?            No            Yes

If not, who? \_\_\_\_\_

Do they help with getting food or with cooking? Does anyone?

2. What other meal services do you use? (if any) (and I will explain what these are)

\_\_\_ Food pantries            \_\_\_ Food Stamps            \_\_\_ Do not use any

\_\_\_ Soup Kitchens            \_\_\_ Other feeding programs? (list)

3. If you do not use any other programs, why is that? Transportation? Mobility? Paperwork?

4. How often do you skip meals because you do not have enough food?

\_\_\_ Nearly every day            \_\_\_ About once a week            \_\_\_ Other (list)

\_\_\_ A few times a week            \_\_\_ A few times a month

5. How do you get the food you have?

6. Are finances the main reason why you are unable to have enough food? If not, list other causes.
7. Do you feel that you get enough food from all of your food resources? (The ones I have mentioned above if they do use any)
8. If there is anything that your food resources could do in order to serve you better, what would it be? (This question is asked if they do use any other food resources)
9. Do you have any social support, such as family members who assist you in obtaining food? Are they reliable?
10. Are there any obstacles you face when trying to get food or when you try to use food programs? (I will elaborate when asking this question depending on participant)
11. Do you have any trouble preparing meals?
12. Tell me a little about the foods you eat. Describe to me the meals you have on a typical day.
13. Do you eat these foods because of choice, how much they cost, or because of access to these foods?



## **APPENDIX D: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Marie C. Gualtieri**

Date: **December 06, 2013**

Dear Researcher:

On 12/6/2013, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: 'Til Death Do I Wait: Experiences of Food Insecurity among  
Elders on the Meals on Wheels Waiting List  
Investigator: Marie C. Gualtieri  
IRB Number: SBE-13-09775  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 12/06/2013 02:08:05 PM EST

A handwritten signature in black ink that reads 'Joanne Muratori'.

IRB Coordinator

## REFERENCES

2011. "2011 Florida PSA Profiles." Retrieved July 2, 2013 ([http://elderaffairs.state.fl.us/doea/pubs/stats/County\\_2011/Counties/PSA7.pdf](http://elderaffairs.state.fl.us/doea/pubs/stats/County_2011/Counties/PSA7.pdf)).
2013. "Learn About Hunger." Retrieved July 2, 2013 (<http://www.aarp.org/aarp-foundation/our-work/hunger/learn-about-hunger/>).
2013. "Our Services." Retrieved July 15, 2013 (<http://www.seniorsfirstinc.org/our-services/>).
2013. "Senior Hunger." Retrieved July 1, 2013 (<http://feedingamerica.org/hunger-in-america/hunger-facts/senior-hunger.aspx>).
2013. "Senior Hunger State by State." Retrieved July 1, 2013 (<http://www.mowaa.org/page.aspx?pid=471>).
2013. "Senior Report." United Health Foundation. Retrieved July 17, 2013 (<http://www.americashealthrankings.org/senior/all/2013>).
2013. "Study Reveals 8K Elderly Go Hungry in Orlando." Retrieved July 16, 2013 (<http://www.wftv.com/news/news/local/study-reveals-8k-elderly-go-hungry-orlando/nYH5H/>).
2013. "Supplemental Nutrition Assistance Program." Retrieved July 17, 2013 (<http://www.fns.usda.gov/snap>).
2013. "The History of Meals on Wheels." Retrieved September 30, 2013 (<http://www.mowaa.org/Page.aspx?pid=225>).
- AbuSabha, Rayane, Gene Shackman, Barbara Bonk and Steven J. Samuels. 2011. "Food Security and Senior Participation in the Commodity Supplemental Food Program." *Journal of Hunger & Environmental Nutrition* 6(1): 1-9.
- Auslander, Judith and Diana White. "The Psycho-Social Aspect of Malnutrition and Seniors."
- Brewer, Dawn, Christina S. Catlett, Katie N. Porter, Jung Sun Lee, Dorothy B. Hausman, Sudha Reddy and Mary Ann Johnson. 2010. "Physical Limitations Contribute to Food Insecurity and The Food Insecurity-Obesity Paradox in Older Adults at Senior Centers in Georgia." *Journal of Nutrition for the Elderly* 29(2): 150-169.
- Brownie, Sonya. 2006. "Why are Elderly Individuals at Risk of Nutritional Deficiency?" *International Journal of Nursing Practice* 12: 110-118.

- Darnton-Hill, Ian. 1992. "Psychosocial aspects of nutrition and aging." *Nutrition Reviews* 50: 476–479.
- DeVavas-Walt, Carmen, Bernadette D. Proctor, Jessica C. Smith. 2012. "Income, Poverty, and Health Insurance Coverage in the United States: 2011." Current Population Reports: Issued September 2012.
- Finegold, Kenneth, Fredrica D. Kramer, Brendan Saloner and Joanna Parnes. 2008. "The Role of the Commodity Supplemental Food Program (CSFP) in Nutritional Assistance to Mothers, Infants, Children, and Seniors. Washington, DC: The Urban Institute, US Department of Agriculture Economic Research Service; 2008. Report No. CCR- 48." Available at: <http://www.ers.usda.gov/Publications/CCR48/>. Accessed July 17, 2013.
- Florida Health Care Association. "Facts About Long Term Care in Florida" retrieved February 26, 2014 ([http://www.fhca.org/media\\_center/long\\_term\\_health\\_care\\_facts](http://www.fhca.org/media_center/long_term_health_care_facts)).
- Higgins, Mary Meck and Bethany J. Murray. 2010. "Nutrition-Related Practices and Attitudes of Kansas Skipped-Generation(s) Caregivers and Their Grandchildren." *Nutrients* 2: 1188-1211.
- Johnson, Mary Ann, Johanna T. Dwyer, Gordon L. Jensen, Joshua W. Miller, John R. Speakman, Pamela Starke-Reed and Elena Volpi. 2011. "Challenges and New Opportunities for Clinical Nutrition Interventions in the Aged." *Journal of Nutrition* 141(3): 535-541.
- Jordan, Jamillah. 2007. "Grocery Gap Project: Race, Hunger, and Food Access." Congressional Hunger Center. Retrieved July 3, 2013 (<http://www.hungercenter.org/publications/the-grocery-gap-project-race-hunger-and-food-access/>).
- Lee, Jung Sun and Edward A. Frongillo Jr. 2001. "Factors Associated With Food Insecurity Among U.S. Elderly Persons: Importance of Functional Impairments." *Journal of Gerontology* 56B: 594-599.
- Lichtenstein Alice H., Helen Rasmussen, Winifred W. Yu, Susanna R. Epstein, and Robert M. Russell. 2008. "Modified MyPyramid for Older Adults." *Journal of Nutrition* 138:78-82.
- Millward, D. Joe 2008. "Sufficient Protein for Our Elders?" *American Journal of Clinical Nutrition* 88: 1187-1188.
- Mion L.C., J.A. McDowell and L.K. Heaney. 1994. "Nutritional assessment of the elderly in the ambulatory care setting." *Nurse Practitioner Forum* 5: 46–51.
- Ramic, Enisa, Nurka Pranjic, Olivera Batic-Mujanovic, Enisa Karic, Esad Alibasic, and Alma Alic. 2011. "The effect of loneliness on malnutrition in elderly population." *Medical Archives* 65: 92-95.

- Santich, Kate. 2013. "Dyer: Time to Solve 'Epidemic of Senior Hunger' in Orlando." Retrieved July 16, 2013 ([http://articles.orlandosentinel.com/2013-06-11/features/os-senior-hunger-orlando-20130611\\_1\\_senior-hunger-food-stamps-supplemental-nutrition-assistance-program](http://articles.orlandosentinel.com/2013-06-11/features/os-senior-hunger-orlando-20130611_1_senior-hunger-food-stamps-supplemental-nutrition-assistance-program)).
- Sedensky, Matt. 2010. "Seniors Brace for Social Security Freeze." Retrieved July 19, 2013 ([http://www.huffingtonpost.com/2010/10/11/seniors-brace-for-social-security-freeze\\_n\\_758887.html](http://www.huffingtonpost.com/2010/10/11/seniors-brace-for-social-security-freeze_n_758887.html)).
- Stewart, Susan T., David M. Cutler, and Allison B. Rosen. 2013. "US Trends in Quality-Adjusted Life Expectancy From 1987 to 2008: Combining National Surveys to More Broadly Track the Health of the Nation." *American Journal of Public Health* 103: 78-87.
- United States Department of Agriculture. 2012. "Food Security in the U.S." <http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us.aspx>.
- Wallace, Steven P., Cricel Molina and Mona Jhawar. 2007. "Falls, Disability and Food Insecurity Present Challenges to Healthy Aging." UCLA Center for Health Policy Research Brief.
- Wenzlau, Sophie. 2013. "Global Food Prices Continue to Rise." Retrieved July 9, 2013 from <http://www.worldwatch.org/global-food-prices-continue-rise-0>.
- Wolfe, Wendy S., Edward A. Frongillo and Pascale Valois. 2003. "Understanding the experience of food insecurity by elders suggests ways to improve its measurement." *Journal of Nutrition* 133: 2762-2769.
- Ziliak, James P., Craig C. Gundersen and Margaret Haist. 2008. "The Causes, Consequences, and Future of Senior Hunger in America." *University of Kentucky Center for Poverty Research Special Reports*. Retrieved July 8, 2013 from <http://www.mowaa.org/document.doc?id=13>.
- Ziliak, James P. and Craig C. Gundersen. 2008. "Senior Hunger in the United States: Differences Across States and Rural and Urban Areas." *University of Kentucky Center for Poverty Research Special Reports*. Retrieved July 8, 2013 from <http://www.ukcpr.org/Publications/senior-hungerfollowup.pdf>.
- Ziliak, James P. and Craig C. Gundersen. 2013. "Spotlight on Food Insecurity among "Senior Americans: 2011." National Foundation to End Senior Hunger (NFESH) Report.